

## High Performance Freeze-Drying Flaskware

- Borosilicate Glass
- Compatible with All Freeze-Dryer Brands
- Maximum Shell-Freezing Volume
- Free Standing Flat Base Design
- Rounded Edges for Maximum Strength
- Easy to Clean Shoulders
- Greaseless Snap-fit Silicone Top with Filter
- Eliminates Shell-Freezing Fluid Issues Associated with Wide-Mouth and Shoulder-less Flasks
- Six Convenient Sizes
- Unique 75ml and 300ml designs for Optimum Plug Freezing



Millrock's flaskware design offers maximized freeze-drying performance and maximum internal volume for shell freezing. The contoured shoulder allows the flask to hold more product when placed on its side for the shell freezing process. In addition, the smooth radius used for the shoulders provides maximum strength and easy access for cleaning. By designing the flaskware to optimize these conditions, your drying runs can be completed faster and more consistently.

During shell freezing, the product must be frozen so that the heat transfer fluid does not contact and contaminate the flask top/adapter. Many 'wide-mouth' flasks are designed with small or no shoulders, which results in the top touching the shell-freezing fluid. Millrock's thoughtful design keeps the silicone top out of harm's way to keep your product safe. The tops also accommodate a filter to prevent carryover of solid particles during rapid sublimation.

Millrock's Stubby flasks offer maximum surface area for plug frozen product. Stubby flasks are available in 75ml and 300ml sizes.

Autoclaveable snap-fit silicone tops offer a quick and easy way to attach the flaskware to your freeze-dryer without grease. The flask top port offers the largest internal opening possible to allow the water vapor to freely pass. Many competitive tops are designed to attach to a 3/4" port, but have a restrictive vapor path, for example, the port may have a 3/8" ID which creates a vapor path restriction. Millrock's tops provide a full 1/2" ID vapor path.

### Special points of interest:

- Silicone Snap-fit tops with 3/4" opening and a full 1/2" vapor path.
- Optional filters
- Glass adapters for 3/4" and 1/2" applications



## Flaskware specifications

Size (ml)	Height (mm)	Width OD (mm)	Mouth ID (mm)	Part Number Flask Only
75	58	60	33	704-0001
150	98	60	33	704-0002
300	107	100	55	704-0003
600	145	100	55	704-0004
900	182	100	55	704-0005
1200	220	100	55	704-0006

### Snap-fit Tops

Snap-fit silicone tops are greaseless and autoclavable. Both 33mm and 55mm tops are available.

- Fits 33mm or 55mm opening flasks
- 3/4" Port
- Greaseless Snap-fit
- Optional Filter

### Filters

Non-gauze filters eliminate solid particle carryover that may be lifted away from the dried product by the rapid subliming water molecules or from vacuum release at the end of drying. Filters are provided with retaining o-rings.

### Adapters

Glass adapters are available to reduce the 3/4" port to a 1/2" valve port. In addition, 45 degree adapters in 3/4" to 3/4" and 3/4" to 1/2" are available. Millrock has the adapters to fit your needs.

### Other products by Millrock...

- Freeze-drying
  - Bench-top Manifold Dryer
  - Laboratory Tray and Manifold Dryer
  - Research Tray Dryer
  - Freezedryware™
  - Vacuum Valves
- Recirculating Chillers
- Laboratory Freezers

If you don't see what you're looking for, contact us! We're always looking for new products.

Item	Part Number
<b>Flask Assembly Includes Top</b>	
75 ml	101-0016
150 ml	101-0017
300 ml	101-0018
600 ml	101-0019
900 ml	101-0020
1200 ml	101-0021
<b>Snap-fit Silicone Tops</b>	
33 mm	703-0005
55 mm	703-0004
<b>Filter Kit</b>	101-0005
<b>Glass Adapters</b>	
3/4" to 3/4" Straight	704-0007
3/4" to 1/2" Straight	704-0009
3/4" to 3/4" 45 deg	704-0008
3/4" to 1/2" 45 deg	704-0010



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